

STATEMENT OF INTENT

Between

THE UNITED STATES DEPARTMENT OF ENERGY

and

THE FRENCH COMMISSARIAT A L'ENERGIE ATOMIQUE

IN THE FIELD OF

LOW-LEVEL RADIOACTIVE WASTE

WHEREAS

The UNITED STATES DEPARTMENT OF ENERGY (DOE) and the FRENCH COMMISSARIAT A L'ENERGIE ATOMIQUE (CEA) have entered into an Agreement in the field of Radioactive Waste Management on July 26, 1983.

Article 2 of the DOE/CEA Waste Management Agreement provides for the possibility of cooperation in the areas of preparation and packaging of radioactive waste, decontamination and decommissioning, surface and subsurface storage of radioactive waste, and characterization of geologic formations.

Article 4 of the DOE/CEA Waste Management Agreement provides for Implementing Agreements which may involve the associated firms or laboratories of DOE and CEA or their contractors or subsidiaries; within the CEA, the French National Radioactive Waste Management Agency (Agence Nationale pour la Gestion des Dechets Radioactifs - ANDRA) is in charge of all activities relating to the management of radioactive waste produced and disposed of in France, more particularly regarding surface and subsurface disposal and characterization of geological formations. The nature of ANDRA within the CEA, its role in low-level waste management, and its responsibilities under this statement are stated in Attachment 1.

DOE is responsible for the management of radioactive wastes generated at its facilities and, therefore, is interested in the ANDRA approach to waste treatment and disposal, particularly as it might apply to DOE sites at Oak Ridge, Tennessee and the Savannah River Plant at Aiken, South Carolina.

CEA, specifically through ANDRA, together with its associated firm SOCIETE GENERALE POUR LES TECHNIQUES NOUVELLES (SGN), possesses a unique capability to provide certain engineering and technical support services in the areas of radioactive waste handling and treatment, decontamination and decommissioning, and disposal.

NOW THEREFORE

DOE and CEA hereby confirm their intent to expand their radioactive waste management cooperation in the area of surface and subsurface disposal and storage of low-level radioactive waste, as well as to related activities.

The terms and conditions defining the cooperation shall be set forth in a contract or contracts to be negotiated between DOE or its contractors and SGN. Such contract or contracts shall in particular include terms and conditions governing patent rights and the exchange of information between DOE and its contractors, on the one side, and CEA (mainly ANDRA) and its associated firm SGN on the other.

It is the intent of DOE and CEA that CEA through ANDRA or other concerned divisions shall provide to DOE the information controlled or developed by CEA which is required by SGN to perform the engineering services within the task areas described in the contract or contracts, and that DOE shall provide to CEA the results of the work to be performed at Oak Ridge or other projects under the contract or contracts, within the task areas described in the contract or contracts. This cooperation could be further extended to other DOE sites, if so desired, through specific contracts.

Based on preliminary discussions among ANDRA, SGN, DOE, and DOE contractors, it is expected that SGN may provide the following types of services under such contract or contracts:

- 1) Feasibility and Trade-off Studies
- 2) Preconceptual Design
- 3) Conceptual Design
- 4) Preliminary and Final Design Services
- 5) Review and Comment
- 6) Facility and Performance Information
- 7) Safety Analyses
- 8) Cost Estimating
- 9) Scheduling
- 10) Systems Integration
- 11) Bid Specifications
- 12) Supply and Delivery of Specific Equipment
- 13) Review of Construction
- 14) Assistance During System Installation, Checkout, and Relocating Operation

The specific services will be identified in such contract or contracts by mutual agreement for performance by SGN, provided the Project is otherwise proceeding, and subject to the availability of appropriated funds.

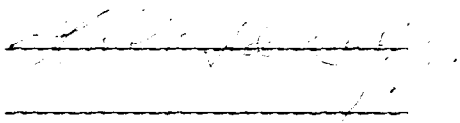
Planned task areas requiring the foregoing services are listed below and detailed in Attachment 2.

1. Development and preparation of a Facilities Qualification Handbook which will provide background and overview information on the site characteristics and the waste management approach employed at Centre de la Manche.
2. Development and preparation of a detailed, technical summary of the design specifications and performance data for the Centre de la Manche waste management facility.
3. Training of approximately five DOE and contractor personnel in the waste management procedures and processes employed by ANDRA at the Centre de la Manche.
4. Presentations (approximately four) to DOE and other government officials, their contractors, or the public by SGN personnel summarizing the results of items one and two above.

Additional task areas may be added by mutual agreement.

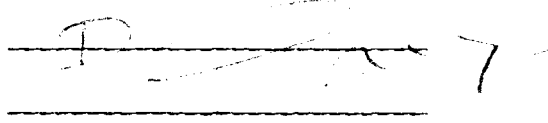
Signed at Washington, DC this 20th day of June 1986 in duplicate in the French and English languages, each equally authentic.

FOR THE UNITED STATES
DEPARTMENT OF ENERGY



Assistant Secretary
for Defense Programs

FOR THE COMMISSARIAT
A L'ENERGIE ATOMIQUE



Nuclear Attache
Embassy of France

ATTACHMENT 1

FRENCH NATIONAL RADIOACTIVE WASTE MANAGEMENT AGENCY

(ANDRA)

1 - Nature and role

Created by a decree of 7 November 1979, ANDRA is a division of the CEA specifically in charge of all matters arising from or in connection with the radioactive waste management. ANDRA is headed by a Director appointed by the French Minister of Industry.

In accordance with the general policy and regulations in the field of radioactive waste management, ANDRA is involved in the industrial management and operation of facilities for processing, conditioning, and disposal of radioactive waste.

ANDRA is exclusively in charge of:

- defining rules for conditioning and storage of wastes existing in CEA Group premises, and management of this waste,
- managing the disposal sites for which CEA is nuclear operator,
- carrying out design, research, study, and achievement of new surface or subsurface storage sites, including geological characterization formations,
- providing appropriate documents needed for licensing and commissioning procedures,
- gathering forecasts of radioactive waste output.

Consequently ANDRA has acquired an important knowledge and expertise in the field of design, location, and construction of waste disposal sites, including the management thereof and the definition of radioactive waste conditioning and storage specifications.

More particularly, ANDRA has designed and is implementing an integrated system for the management of low and medium level radioactive waste called SIGMA. SIGMA is devoted to provide a consistent and optimized procedure for the waste management from the taking charge of the waste in the producer premises to their final disposal.

ANDRA possesses all the necessary information in the field and can resort to any other divisions or laboratories of CEA for the performing of its duties.

2 - Role of ANDRA in the DOE-CEA Collaboration

ANDRA will be the representative of CEA in the implementation of the Collaboration and will provide necessary information available to it in the field of radioactive waste management and particularly that related to surface and subsurface low-level waste disposal.

This supply of information and any related studies may be provided by ANDRA either to SGN or directly to DOE or its contractors within the task areas described in the contract or contracts.

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ATTACHMENT 2

PLANNED TASK AREAS

1) Development and Preparation of a Facilities Qualification Handbook

- The "Facilities Qualification Handbook" provides all of the basic information related to operating the "Centre de la Manche" disposal facility and activities to the selection of a new site based on the actual experience of ANDRA.
- The summary of the "Facilities Qualification Handbook" is as follows:

I. Introduction

II. Low-level waste disposal and nuclear safety

III. Overview of integrated waste management in France

IV. Waste acceptance criteria

4.1 Regulatory guidelines in France

4.2 Waste specifications

4.3 Process acceptance

V. Site selection and qualification

5.1 General specifications of disposal facility

5.2 Site selection criteria

5.3 Site selection methods

5.4 Site testing and evaluation facility

VI. Final disposal concepts

VII. LLW processing

7.1 Volume reduction

7.2 Solidification

7.3 Packaging

VIII. Transportation

8.1 Transportation regulations in France

8.2 Organization of transportation activities

8.3 Optimization of transportation modes

IX. Low-Level Waste Disposal at the Centre de la Manche

9.1 Design bases

- 9.1.1 Containment of radioactive materials
- 9.1.2 Type of wastes
- 9.1.3 Characteristics of waste
- 9.1.4 Disposal capacity
- 9.1.5 Receiving capacity
- 9.1.6 Planned operating period

9.2 Site characteristics

- 9.2.1 Geographical situation
- 9.2.2 Demography
- 9.2.3 Geology, seismology
- 9.2.4 Climatology
- 9.2.5 Hydrography, hydrology, hydrogeology
- 9.2.6 Oceanography

9.3 Design and construction schedule

9.4 Disposal media, structures, and surface area

- 9.4.1 Concrete pad
- 9.4.2 Monolith
- 9.4.3 Tumulus
- 9.4.4 Disposal capacity
- 9.4.5 Areas in operation
- 9.4.6 Future extensions

9.5 Lay-out of facilities

9.6 LLW receiving and disposal

- 9.6.1 Sequence of operations
- 9.6.2 Handling equipment
- 9.6.3 Intermediate storage
- 9.6.4 On-site waste processing
- 9.6.5 Operating staff

9.7 Inventory of stored waste

9.8 Effluent collection and treatment

9.9 Environmental monitoring and sampling

9.10 Facility economics in France

- 9.10.1 Capital costs
- 9.10.2 Operating costs
- 9.10.3 Disposal fees

X. General Information on Quality Assurance and Control

10.1 QA/QC in LLW product

- 10.1.1 In-plant verification of LLW processing
- 10.1.2 Inspection of LLW package
- 10.1.3 Labelling of LLW package

10.2 QA/QC of disposal facility

- 10.2.1 Design
- 10.2.2 Construction
- 10.2.3 Operations
- 10.2.4 Facility closure

10.3 Record keeping

XI. Personnel Training

XII. Public Acceptance

XIII. Experience and Capabilities of ANDRA and SGN Resumes of Key Personnel

2) Development and Preparation of a Detailed, Technical Summary of Design Specifications and Performance Data

The report is intended to be comprehensive in nature in order to transfer:

- Know how
- Methods
- Design information
- Operating data
- Commissioning procedures

It is planned that this document will consist of:

- Preliminary safety analysis report
- Environmental impact statement (preliminary)
- Quality assurance, quality control program
- Information of disposal structures, auxiliaries facilities
- Specifications for equipment, disposal containers
- Detailed operating procedures

3) Training of DOE and Contractor Personnel

It is planned that SGN will provide a three-week training course at the "Centre de la Manche" for approximately five people.

Travel expenses and living costs are not part of the transfer of Technology Agreement.

4) Presentations

SGN plans to conduct approximately four presentations to DOE, other governmental officials and contractors, and the public to facilitate technology transfer.